

REMARKS

The present amendment seeks to place the application in better conformance with U.S. practice. A page containing an Abstract of the Disclosure is enclosed. Entry of the amendment is requested.

Respectfully submitted,

By



Aron Preis
Attorney for Applicants
Reg. No. 29,426

Bayer Corporation
100 Bayer Road
Pittsburgh, Pennsylvania 15205-9741
(412) 777-8343
FACSIMILE PHONE NUMBER:
(412) 777-8363
s:\shared\jmf\AP6856

VERSION TO SHOW MARKINGS WITH CHANGES MADE

On page 1, the title of the patent application has been amended as follows:

[A process] Method for Copolymerizing Polar and Non-Polar Monomers

The Abstract (page 29) has been amended as follows:

[A process] Method for Copolymerizing Polar and Non-Polar Monomers

Abstract of the Disclosure

A process for producing a copolymer is disclosed. The process entails polymerizing at least one polar monomer and at least one non-polar monomer in the presence of one or more compounds of transition metals of groups 5 to 10 of the Periodic System according to IUPAC 1985, one or more radical-producers, and an optional co-catalyst. The copolymers thus produced are suitable for the preparation of a variety of articles, including adhesives.

~~The invention provides a process for copolymerizing polar and non-polar monomers, a catalyst system suitable for this containing one or more transition metal compounds from groups 5-10 of the Periodic System, one or more radical-producers and optionally one or more co-catalysts, the polymers obtainable therefrom and use of the polymers which can be prepared by the process to produce molded articles of all types.~~

IN THE CLAIMS:

Claim 12 has been cancelled.

Claims 3, 4, 7, 8, 9, 10 and 11 have been amended as follows:

3. (Amended) A process according to [one or more of Claims 1 to 2,] Claim 1 characterized in that the radical-producer is chosen so that the radical-producer(s) initiate polymerization and do not react in a detrimental fashion with the transition metal compound.

4. (Amended) A process according to [one or more of Claims 1 to 3,] Claim 1 characterized in that one or more transition metal complex cation forming compounds or coordination complex compounds are used as co-catalyst, chosen from the group of strong, neutral Lewis acids, ionic compounds with Lewis acid cations or Broenstedt acid cations and non-coordinating anions.

7. (Amended) A composition according to [one of more of Claims 5 to 6,] Claim 5 characterized in that the radical-producer is a peroxide, a diazo compound or a mixture thereof.

8. (Amended) A composition according to [one or more of Claims 5 to 7,] Claim 5 characterized in that one or more compounds chosen from the group of strong, neutral Lewis acids, ionic compounds with Lewis acid cations or Broenstedt acid cations and non-coordinating anions are used as co-catalysts.

9. (Amended) A composition according to [one or more of Claims 5 to 8,] Claim 5 characterized in that the transition metal compound is chosen so that the transition metal compound, optionally in the presence of a co-catalyst, can reversibly form a complex with a radically growing polymer chain and non-polar monomers can be inserted into the bond formed in this way between transition metal and polymer chain.

10. (Amended) [Use of] A method of using the composition according to [one or more of Claims 5 to 8] Claim 5 comprising catalyzing the [as a] polymerization [catalyst] of copolymers.

11. (Amended) Copolymers which have a statistical distribution on the molecular level [and which can be] prepared in a process according to [one or more of Claims 1 to 4] Claim 1.

Claims 13 through 22 have been added as follows:

--13. A process for producing a copolymer comprising polymerizing at least one polar monomer and at least one non-polar monomer in the presence of one or more compounds of transition metals of groups 5 to 10 of the Periodic System according to IUPAC 1985 and one or more radical-producers.

14. The process of Claim 13 wherein the polymerizing is in the further presence of one or more co-catalysts.

15. The copolymer prepared by the process of Claim 13.

16. A composition containing one or more transition metal compounds from groups 5-10 of the Periodic System according to IUPAC 1985 and one or more radical-producers.

17. The composition of Claim 16 further containing one or more co-catalysts.

18. The composition of Claim 16 wherein the transition metal a member selected from the group consisting of vanadium, chromium, manganese, iron, cobalt, nickel, ruthenium, rhodium and palladium.

19. The composition of Claim 16 wherein the radical-producer is at least one member selected from the group consisting of peroxide and a diazo compound.

20. The composition of Claim 17 wherein the co-catalyst is selected from the group consisting of strong Lewis acids, neutral Lewis acids, ionic compounds with Lewis acid cations, ionic compounds with Brønstedt acid cations, and non-coordinating anions.

21. A method of using the copolymer of Claim 15 comprising preparing a molded article.

22. A method of using the copolymer of Claim 15 comprising preparing an adhesive.--